Organic Insecticides and Fungicides 79-2-1/[illegible]

A New Method for the Production of Mixed Esters of Thiophosphoric Acid

accordance with M.I. Kabachnik, S.T. Ioffe and T.A. Mastryukova (reference 4), since O,O-dialkyl-S-aryl-thiophosphates and in only one case thionisomers predominate in the reaction product. The results obtained show that the quantity ratio of the isomers is more influenced by the attacking reagent than by the reaction medium. The working methods as well as tables of the properties of esters are given. There are 1 table, and 4 Slavic references.

ASSOCIATION: Scientific Institute for Fertilizers, Insecticides and Fungicides (Nauchnyy institut po udobreniyam i insektofungitsidam)

SUBMITTED: January 16, 1957

AVAILABLE: Library of Congress

Card 2/2

MEL'NIKOV, N. N.

AUTHORS: Mandel'baum, Ya. A., Mel'nikov, N. N., Petrova, N. I. 79-2-42/64

TITLE: Organic Insecticides and Fungicides (Iz oblasti organicheskikh insektofungitsidov)
XXXII. The Synthesis of Some Mixed Ethers of Thiophosphoric Acid
(XXXII. Sintez nekotorykh smeshannykh efirov tiofosfornoy kisloty).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 479-480 (USSR).

ABSTRACT: The reaction between mixed dialkylchlorthiophosphate and methanol, ethanol resp. was investigated in the presence of caustic soda. It is found that the corresponding trialkylthiophosphates are obtained with good yields (70-94%) in the reaction. The reaction can schematically be represented as follows:

$$\begin{matrix} RO \\ R'O \end{matrix}\!\!>\!PSCl + R''CH + NaCH \rightarrow \begin{matrix} RO \\ R'O \end{matrix}\!\!>\!PSOR'' + NaCl + H_2O$$

The major part of the compounds obtained have hitherto not yet been mentioned in technical literature. The specific properties of the obtained compounds as well as the preparation process are given.
There are 1 table, and 3 Slavic references.

Card 1/2

Organic Insecticides and Fungicides 79-2-42/64

ASSOCIATION: Scientific Institute for Fertilizers, Insecticides and Fungicides (Nauchnyy institut po udobreniyam i insektofungitsidam).

SUBMITTED: January 16, 1957.

AVAILABLE: Library of Congress.

Card 2/2

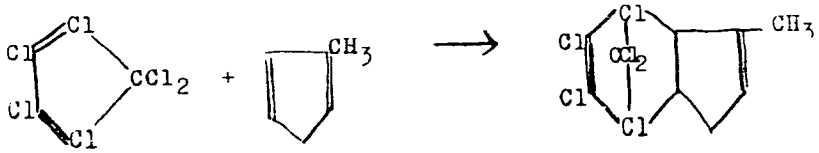
MEL'NIKOV, N. N.

AUTHORS: Kukalenko, S. S., Mel'nikov, N. N., Maryshkina, T. I., Shuykin, N. I. 79-2-23/6

TITLE: Organic Insecticides and Fungicides (Iz oblasti organicheskikh insektofungitsidov) XXXIII. Synthesis of Some Derivatives of 4,7-Endomethylenetetrahydroindan (XXXIII. Sintez nekotorykh proizvodnykh 4,7-endometilentetragidroindana).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 480-483 (USSR)

ABSTRACT: In order to investigate the insecticide-properties of chlordane and heptachlorine homologues, an adduct was obtained from hexachlorocyclopentadiene and 3-methylcyclopentadiene-2,4 by heating at 85-105°C. It is assumed that the reaction takes place as follows:



The product, a yellow viscous liquid, was chlorinated or bromized resp. and the compounds obtained were tested for their in-

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79-2-43/64

Organic Insecticides and Fungicides. XXXIII. Synthesis of Some Derivatives of 4,7-Endomethylenetetrahydroindan.

secticide-properties. It was found that all of them have a lower insecticide effect than "chlordane". These compounds have hitherto not been described in technical literature. The working methods and the specific data of the compounds are given. There are 5 references, 2 of which are Slavic.

ASSOCIATION: Scientific Institute for Fertilizers, Insecticides and Fungicides and Institute for Organic Chemistry AS USSR (Nauchnyy institut po udobreniyam i insektofungitsidam i Institut organicheskoy khimii Akademii nauk SSSR).

SUBMITTED: January 16, 1957

AVAILABLE: Library of Congress

Card 2/2

MEL'NIKOV, N.N.; MANDEL'BAUM, Ya.A.; BAKANOVA, Z.M.

Organic insecti- and fungicides. Part 34: New synthesis of trialkyl-phosphites. Zhur.ob.khim. 28 no.9:2473-2474 S '58. (MIRA 11:11)
(Phosphites)

SOV/79-28-11-49/55

AUTHORS: Volodkovich, S. D., Mel'nikov, N. N., Plate, A. F., Pryanishnikova, M. A.

TITLE: From the Field of Organic Insecticides (Iz oblasti organicheskikh insektofungitsidov) XXXV. On the Reaction of the 1,1-Difluoro-Tetrachloro-Cyclopentadiene With Some Unsaturated Compounds (XXXV. O vzaimodeystvii 1,1-diftortetrakhlortsiklopentadiyena s nekotorymi nepredel'nymi soyedineniyami)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 11, pp 3123-3126 (USSR)

ABSTRACT: In the investigation of the effect of the chlorine containing insecticides of the type of "aldrine", "dildrine", and their analogs as well as the dependence of the fatal effect of these compounds on insects upon the molecular structure it was of some interest to investigate in this respect the hitherto unknown fluorine containing analogs of "aldrine". First the following compounds were synthesized by the reaction of 1,1-difluoro-tetrachloro-cyclopentadiene with bicyclo-(2,2,1)-heptadiene-2,5 and bicyclo-(2,2,1)-heptene-2: 1,2,3,4-

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SOV/79-28-11-49/55

From the Field of Organic Insecticides. XXXV. On the Reaction of the 1,1-Difluoro-Tetrachloro-Cyclopentadiene With Some Unsaturated Compounds

tetrachloro-1o-1o-difluoro-1,4,5,8-diendomethylene-1,4,4a,5,8,8a-hexahydronaphthalene, and 1,2,3,4-tetrachloro-1o,1o-difluoro-1,4,5,8-diendomethylene-1,4,4a,5,6,7,8,8a-octahydronaphthalene. As the next analogs of "aldrine" they are of great interest. Besides, the adducts of the 1,1-difluoro-tetrachloro-cyclo-pentadiene with cyclopentene, 5-amyl bicyclo-(2,2,1)-heptene-2,5-methyl bicyclo-(2,2,1)-heptene-2-carboxylic acid-5, acryl nitrile and the esters of maleic acid were synthesized (Table). The reaction of the above pentadiene with the men-tioned unsaturated compounds takes place easily, the yields are, however, small as it is easily polymerized and trans-formed into the inert dimer. All synthesized compounds have a weak insecticide effect. Only the difluoro "aldrine" is an exception as its insecticide effect is similar to that of the chloro indan. There are 1 table and 10 references, 7 of which are Soviet.

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SOV/79-28-11-42/55

From the Field of Organic Insecticides. XXXV. On the Reaction of the 1,1-Difluoro-Tetrachloro-Cyclopentadiene With Some Unsaturated Compounds

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam i Institut organicheskoy khimii Akademii nauk SSSR
(Scientific Institute of Fertilizers and Insecti- and Fungicides, and the Institute of Organic Chemistry, AS USSR)

SUBMITTED: November 1, 1957

Card 3/3

AUTHORS: Mel'nikov, N. N., Volodkovich, S. D. SOV/79-28-12-35/41

TITLE: From the Field of Organic Insecticides (Iz oblasti organicheskikh insektofungitsidov) XXXVI. On the Reaction of Tetrachloro and Pentachloro Cyclopentadiene With Some Unsaturated Compounds (XXXVI. O vzaimodeystvii tetrakhlor- i pentakhlortsiklopentadiyenov s nekotorymi nepredel'nymi soyedineniyami)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 12, pp 3317 - 3319 (USSR)

ABSTRACT: The synthesis and investigation of the final products obtained in the reaction of 2,3,4,5-tetrachloro and 1,2,3,4,5-pentachloro cyclopentadiene with unsaturated compounds are of great interest with respect to the dependence of their insecticide properties on their structure, as also the clarification of the effective mechanism of the given group on insects plays a role in this problem. It was especially interesting to compare the insecticide activity of the fluorine containing analogs of aldrin obtained by the authors some time ago with the compounds containing hydrogen and a halogen atom in the endomethylene bridge. The authors carried out condensations of the two above-mentioned

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From the Field of Organic Insecticides. XXXVI. n the SOV/79-28-12-35/41
Reaction of Tetrachloro and Pentachloro Cyclopentadiene With Some Unsaturated Compounds

cyclopentadienes with bicyclo-[2,2,1]-heptene, bycyclo-[2,2,1]-heptadiene-2,5, the esters of maleic acid and some other compounds (Table). This reaction takes almost the same course as in the case of hexachloro cyclopentadiene at 110 - 130° within a few hours. Some hitherto unknown tetra- and pentachloro derivatives of the polycyclic compounds were synthesized. It was shown that the substituents of the endo-methylene bridge exert a considerable influence upon the toxic effect of the compounds of the aldrin type. This effect is decreased at the transition from the dichloro to the monochloro and further to the difluoro derivatives. 1,2,3,4,10-pentachloro-1,4,5,8-diendomethylene hexahydro-naphthalene is the most active of the compounds synthesized by the authors for the first time. In this respect it exceeds chloroindan twice, and is equal to aldrin. There are 1 table and 8 references, 4 of which are Soviet.

Card 2/3

Sci Res Inst of Fertilizers, Insecticides and Fungicides

MEL'NIKOV, N.N., prof.

Fungicides and disinfectants of seeds. Zashch.rast.ot vred. i bol. 4 no.4:55 Jl-Ag '59. (MIRA 16:5)

(United States-Seeds-Disinfection) (United States-Fungicides)

PAVLOVSKIY, Ye.N., akademik, glavnyy red.; GILYAROV, M.S., otv.red.; LORKH, A.G., red.; MEL'NIKOV, N.N., red.; FEDOTOV, D.M., red.; YAKOVLEV, B.V., red.; ZENYAKIN, L.A., red.; SABLINA, T.B., red.izd-va; VOLKOVA, V.V., tekhn.red.

[Transactions of the International Conference on the Study of the Colorado Beetle and the Development of Measures for its Control] Trudy Mezhdunarodnogo soveshchaniia po izucheniiu koloradskogo zhuka i razrabotke mer bor'by s nim. Moskva, Izd-vo Akad.nauk SSSR, 1959. 329 p. (MIRA 12:8)

1. Mezhdunarodnoye soveshchaniye po izucheniyu koloradskogo zhuka i razrabotke mer bor'by s nim, 1956. 2. Mezhduvedomstvennaya metodicheskaya komissiya po koloradskomu zhuku. Akademiya nauk SSSR, Moskva (for Gilyarov). 3. Nauchnyy institut udobreniy i insektofungitsidov, Moskva (for Mel'nikov). (Potato beetle--Congresses)

PHASE I BOOK EXPLOITATION SOV/3494

Reaktsii i metody issledovaniya organicheskikh soyedineniy, Kn. 8 (Reactions and Research Methods of Organic Compounds, Bk. 8) Moscow, Goskhimizdat, 1959. 446 p. Errata slip inserted. 4,200 copies printed.

Eds (Title page): V.M. Rodionov, Academician (Deceased), B.A. Kazanskiy, Academician, I.L. Knunyants, Academician, M.M. Shemyakin, Academician, and N.N. Mel'nikov, Professor; Ed. (Inside book): V.P. Yevdakov; Tech. Ed.: V.F. Zazul'skaya.

PURPOSE: This book is intended for laboratory personnel at industrial plants, for instructors and students at higher educational establishments, and particularly for scientists and researchers working at the numerous research institutes in the Soviet Union.

COVERAGE: This is the eighth volume in a series "Reactions and Research Methods of Organic Compounds." This series does not duplicate the one published in English under the title "Organic Reactions" and appearing in Russian translation; however, some material, of particular interest, is included in this publication. The present series is primarily devoted to reviewing the works of Soviet chemists. The eighth volume of this series deals with thiocyanation

Card 1/[illegible]

Reactions and Research (Cont.) SOV/3494

reactions of organic compounds and methods of studying them. It presents data on analytical methods using thiocyanates for the study of fats, mineral oils, and volatile oils. It discusses the use of thiocyanates for photographic emulsions, acceleration of rubber vulcanization, stabilization of lubricating oils, purification of tars, abatement of corrosion and purification of metals, production of mustard oil, and synthesis of sulfur-bearing compounds. It also discusses the use of thiocyanates as solvents for acrylonitrile polymers, as intermediate products in the synthesis of dyes, as antiseptics, bactericides, medicines, insecticides, and fungicides. The book contains 327 pages of tables listing 1449 initial organic compounds subjected to thiocyanation. The tables give formulas of the initial compounds, the names and structural formulas of the compounds, the reaction conditions, the reaction products and their yield percent as compared with the theoretical yield, as well as references to the literature on which the data are based. There are 797 references: 376 English, 228 German, 74 Soviet, 47 French, 17 Italian, 25 Japanese, 7 Polish, 7 Scandinavian, 3 Belgian, 8 Swiss, 1 Dutch, and 4 Hungarian.

Card 2/[illegible]

Mel'nikov, N.N.

PHASE I BOOK EXPLOITATION SOV/4054

Akademiya nauk SSSR. Institut nauchnoy informatsii

Khimicheskaya promyshlennost' SSSR (The Chemical Industry of the USSR) Moscow, Goskhimizdat, 1959. 457 p. Errata slip inserted. 4,100 copies printed.

Sponsoring Agency: USSR. Gosudarstvennyy nauchno-tekhnicheskiy komitet.

Ed.: R. S. Roms; Tech. Ed.: P. V. Pogudkin; Editorial Board: A. P. Vinogradov, S. I. Vol'fkovich, N. M. Zhavoronkov, M. I. Ivanov, V. S. Kiselev, I. A. Lunacharskaya (Scientific Secretary), S. S. Medvedev, B. D. Mel'nik, A. S. Planovskiy, A. Ya. Ryabenko (Chief Ed.), and A. V. Topchiyev.

PURPOSE: This book is intended for the personnel of the chemical industry. It will be of interest to the general reader interested in the development and structure of the Soviet chemical industry.

COVERAGE: This book contains 18 articles on various aspects of the Soviet chemical industry. Among the developments in the production of raw materials for the manufacture of chemical products discussed are: 1) the use of raw materials synthesized from natural gas and petroleum to replace food products in the production of synthetic rubber, alcohol, detergents, etc.; 2) the production of acetylene from natural and petroleum gases for the synthesis of vinyl chloride, acrilonitrile, chloroprene, trichloroprene, 1, 4-butadiene, and other organic substances, based on methods developed by M. G. Kucherov, A.Ye. Favorskiy and others; 3) the production of acetylene from saturated hydrocarbons by cracking methane (and its homologs) at 1450° in an electric arc between two special electrodes in a gas reactor, by pyrolysis (thermal oxidation) of methane in an improved furnace designed by B. S. Grinenko, by high-temperature pyrolysis of propane and butane in tubular furnaces, or by other methods of producing acetylene for the production of synthetic rubber, ethyl alcohol, and other organic substances; 4) the synthesis of halogen derivatives of aliphatic hydrocarbons for the production of solvents, refrigerants, pharmaceutical products, etc., and 5) the production of rubber accelerators from nitrogen-containing aliphatic hydrocarbons. The history of plastics production in the Soviet Union is reviewed, and names, locations, and products of plants as well as the names of outstanding personalities in the field are given. The technical level and prospects of further development of different branches of the plastics industries are also discussed

along with methods of manufacturing plastic articles. A special apparatus designed by Ye. M. Mogilevskiy and designated "VA" which permits preparation of viscose solution in one operation is discussed. It is being used to replace the complex, conventional equipment with great savings in space. General trends in the technology of synthetic fiber production are also discussed. A historical review of synthetic rubber production and the achievements of outstanding Soviet scientists in this field are given as well as names, locations and products of synthetic rubber plants. Rubber production and the manufacture of rubber goods are similarly reviewed. Statistical data and outstanding personalities in the development of the aniline dyes, paints and lacquers, mineral fertilizers, insecticides and fungicides, sulfuric acid, soda, mineral salts, radioactive and stable isotopes, and chemical reagents industries are given. Catalytic processes and automation and automatic devices used in the chemical industry are also discussed. Thirty-eight photographs included in the book show outside and interior views of some Soviet chemical industry plants, as well as their manufacturing, material-handling and laboratory equipment. Numerous personalities and facilities are identified in the body of the text. References accompany individual articles.

AVAILABLE: Library of Congress

MEL'NIKOV, N.N.

Simazin, a new herbicide. Zashch.rast.ot vred.i bol. 4 no.3:53 My-Je '59. (MIRA 13:4)
(Triazine)

RAKITIN, Yu. V.; MEL'NIKOV, N.N.; SHIDLOVSKAYA, I.L.; BOKAREV, K.S.

Structure and physiological activity of some 2,4,5-trichlorophenoxy-acetyl amino acids. Fiziol.rast. 6 no.6:729-734 N-D '59. (MIRA 13:4)

1. K.A.Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.
(Growth promoting substances)
(Growth inhibiting substances)

SOV/79-29-1-59/74

AUTHORS: Mandel'baum, Ya. A., Mel'nikov, N. N., Zaks, P. G.

TITLE: On the Field of Organic Insecticides(Iz oblasti organicheskikh insektofungitsidov) XXXVII. Synthesis of Several Mixed Thio- and Dithiophosphoric Acids (XXXVII. Sintez nekotorykh smeshannykh efirov tio- i ditiofosfornykh kislot)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 283-285 (USSR)

ABSTRACT: Besides thio- and dithiophosphates of the general formula $(RO)_2P\overset{X}{=\!\!-}X(CH_2)_nSR'(I)$ used against plant pests, compounds of the general formula

$$(RO)_2P\overset{S}{=\!\!-}SCH_2CON\begin{matrix}R'\\R''\end{matrix}$$

have come into use during the last years (Refs 1, 2). The so-called "acetyl urea" (Refs 3, 4) may serve as an example for the compounds of this kind investigated in the USSR. While investigating how insecticide activity of organo-phosphorus compounds depended on their structure, and in the search for new insecticides, harmless to warm-blooded animals and humans,

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SOV/79-29-1-59/74

On the Field of Organic Insecticides.
XXXVII. Synthesis of Several Mixed Thio- and Dithiophosphoric Acids

the authors particularly directed their efforts towards the synthesis of the mixed esters of thio- and dithiophosphoric acids of the general formulas (III),(IV), and (V). It was carried out by the reaction of diethyl-thio- and diethyl-dithiophosphates with the corresponding monochloro acetic and monochloro thioacetic acid on heating the reaction solution. As expected, the thionic isomers of the thiophosphates were obtained (Refs 5, 6)(Table). Activity against insects did not quite come up to expectations compared to O,O-diethyl-O,4-nitro-phenyl thiophosphate. There are 1 table and 6 references, 4 of which are Soviet.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam (Scientific Institute for Fertilizers and Insectifungicides)

SUBMITTED: November 20, 1957

Card 2/2

SOV/79-29-2-35/7

AUTHORS: Mel'nikov, N. N., Mandel'baum, Ya. A., Zaks, P. G.

TITLE: On the Field of Organic Insectofungicides (Iz oblasti organicheskikh insektofungitsidov). XXXVIII. On the Reaction of Thiophosphorus Trichloride and the Alkyl Dichloro Thiophosphates With Alcohols (XXXVIII. O vzaimodeystvii tiotrekhkhloristogo fosfora i alkildikhlortiofosfatov so spirtami)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 522-526 (USSR)

ABSTRACT: In continuation of previous papers published by Mel'nikov and coworkers (Refs 1-11) the authors investigated the reaction of thiophosphorus trichloride and the alkyl dichloro thiophosphates with alcohols under various conditions. They obtained various products according to the conditions of reaction and the ratio of the reacting compounds. On the reaction of 2 mols ethyl alcohol with 1 mol thiophosphorus trichloride the ethyl dichloro thiophosphate (45-50%) and ethyl thiophosphoric acids (20%) are obtained at 40-50°. The reaction of 1 mol thiophosphorus trichloride with 4 mols ethyl alcohol at 50-60° leads to a mixture of esters (46-48%) which consists of 80% ethyl-dichloro thiophosphate and 20% diethyl-chloro thiophosphate.

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On the Field of Organic Insectofungicides. XXXVIII. On the Reaction of Thio- phosphorus Trichloride and the Alkyl Dichloro Thiophosphates With Alcohols

however, it is possible to synthesize an almost pure diethyl- chloro thiophosphate in a yield of only 10% if it is heated for a while in a boiling water bath. Besides chloro thio- phosphates also ethyl thiophosphoric acids and ethyl chloride are formed under the above-mentioned conditions. The reactions of thiophosphoric trichloride with alcohols and their succes- sion can be represented by the schemes (3)-(7) mentioned. According to these schemes the authors arrived at the con- clusion that good yields of dialkyl chloro thiophosphates can be obtained on sufficient dilution of the reaction medium with alcohol. This assumption was fully confirmed by experiments (Table 1). Much better yields of dialkyl chloro thiophosphates are obtained by reaction of alcohols with alkyl dichloro thio- phosphates, in the course of which methyl alcohol offers the highest yield (Table 2). The reaction of methyl alcohol with thiophosphorus trichloride or alkyl dichloro thiophosphate leads to trialkyl thiophosphates, however only with small yields (Table 3). Therefore, thiophosphorus trichloride and alkyl dichloro thiophosphates react like typical chloric an- hydrides, similar to acid halides of the other inorganic and

SOV/79-29-2-35/7

On the Field of Organic Insectofungicides. XXXVIII. On the Reaction of Thio phosphorus Trichloride and the Alkyl Dichloro Thiophosphates With Alcohols

organic acids. There are 3 tables and 12 references, 9 of which are Soviet.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam (Scientific Institute of Fertilizers and Insectofungicides)

SUBMITTED: December 24, 1957

Card 3/3

SOV/79-29-2-36/7

AUTHORS: Vol'fson, L. G., Mel'nikov, N. N., Person, A. I.

TITLE: On the Field of Organic Insectofungicides (Iz oblasti organicheskikh insektofungitsidov). XXXIX. The Meltability Diagram of the Binary System of o- and n-Chloro-phenyl-n-chloro-benzene Sulfonates and the Cryoscopic Method of the Determination of n-Chloro-phenyl-n-chloro-benzene Sulfonate (XXXIX. Diagramma plavkosti binarnoy sistemy o- i n-khlorfenil-n-khlorbenzolsul'fonatov i krioskopicheskiy metod opredeleniya n-khlorfenil-n-khlorbenzolsul'fonata)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 526-529 (USSR)

ABSTRACT: One of the most active insectofungicides killing ticks, especially for plants, is n-chloro-phenyl-n-chloro-benzene sulfonate (I), which is known by the terms ether sulfonate, "ovotrane", etc. The commercial preparation usually contains the compound (II), (III) and smaller amounts of phenyl-n-chloro-benzene sulfonate, all of which develop a considerably less intense activity and must be used therefore in high concentrations harmful to plants. Due to the mixture composed of isomeric and related compounds, the determination of the actually active factor in it is very difficult. Up till now, it has

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On the Field of Organic Insectofungicides. XXXIX. The Meltability Diagram of the Binary System of o- and n-Chloro-phenyl-n-chloro-benzene Sulfonates and the Cryoscopic Method of the Determination of n-Chloro-phenyl-n-chloro benzene Sulfonate

not been possible to determine (I) in this technical mixture (Ref 3). In order to attain this aim, the authors tried to start from the physicochemical properties and the cryoscopic constant of compound (I) according to references 4-6, in which pure γ-hexachloro cyclohexane is used as solvent on the analysis of "lindane". For the application of the cryoscopic analysis of (I) the authors investigated primarily the meltability diagram of the binary system n-chloro-phenyl-n-chloro-benzene sulfonate o-chloro-phenyl-n-chloro-benzene sulfonate and determined the cryoscopic constant of (I), which is equal to 13.40 (according to ten determinations; see table 1 and the figure with the diagram). It was shown that the cryoscopic method can be applied to the analysis of the isomeric mixture and related compounds which are present in the technical preparation (I). Table 2 shows data on the analysis of the ternary system: n-chloro-phenyl-n-chloro-benzene sulfonate, o-chloro-phenyl-n-chloro-benzene sulfonate and 2,4-dichloro-phenyl-n-chloro-benzene sulfonate. For details see the experimental part. There are

SOV/79-29-2-36/7

On the Field of Organic Insectofungicides. XXXIX. The Meltability Diagram of the Binary System of o- and n-Chloro-phenyl-n-chloro-benzene Sulfonates and the Cryoscopic Method of the Determination of n-Chloro-phenyl-n-chloro benzene Sulfonate

1 figure, 2 tables, and 9 references, 3 of which are Soviet.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam (Scientific Institute of Fertilizers and Insectofungicides)

SUBMITTED: December 28, 1957

Card 3/3

SOV/79-29-2-57/7

AUTHORS: Mel'nikov, N. N., Sokoleva, Ye. M., Trunov, P. P.

TITLE: On the Field of Organic Insectofungicides (Iz oblasti organicheskikh insektofungitsidov). XL. Synthesis of Some New Sulfamide Derivatives (XL. Sintez nekotorykh novykh proizvodnykh sul'famidov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 529-532 (USSR)

ABSTRACT: Recently many products containing the trichloro-methyl mercapto group have been suggested as fungicides which have only a low toxic effect on plants and warm-blooded animals. Substances of this kind are primarily the trichloro-methyl thioamides and the imides of various carboxylic and sulfo acids (Refs 1-3), the trichloro-methyl esters of thiosulfo acids (Ref 4), etc. In connection with that, the authors investigated various organic compounds containing the trichloro-methyl mercapto group. First various trichloro-methyl thioamides of the sulfo acid of the fatty and aromatic series were synthesized and investigated. It was shown herein that also some sulfo acidamides without the trichloro-methyl mercapto group are active insectofungicides, especially the n-thiocyano anilides of methane acids and n-

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On the Field of Organic Insectofungicides. XL. Synthesis of Some New Sulfamide Derivatives

chloro-benzene sulfo acids which so far have not yet been described. The sulfo acid amides were synthesized by reaction of chloric anhydrides of the corresponding sulfo acids with amine excess in an organic hydrophobic solvent. The sulfo acid amides synthesized for the first time are listed in table 1. The tri chloro-methyl thioamides of sulfo acids were obtained according to the following reaction in alkaline medium:

$$RSO_2NHR_1 + CCl_3SCl + NaOH \rightarrow RSO_2N\begin{matrix}R_1\\ \diagup\\ \diagdown\\ SCCl_3\end{matrix} + NaCl + H_2O$$

The compounds synthesized and their properties are listed in table 2. Three of them are new. Not every sulfamide that contains the trichloro-methyl mercapto group is a strong fungicide; only the products 1-3 and 5-7 possess this property (Table 2). There are 2 tables and 7 references, 2 of which are Soviet.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam (Scientific Institute of Fertilizers and Insectofungicides)

SUBMITTED: December 28, 1957

Card 2/2

5 (3)

AUTHORS: Mel'nikov, N. N., Kraft, V. A. SOV/79-29-3-46/61

TITLE: On Some Derivatives of 4,5-Dichloro-3,6-endoxohexahydro Phthalic Acid (O nekotorykh proizvodnykh 4,5-dikhlor-3,6-endoksogeksagidroftalevoy kisloty)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 968-971 (USSR)

ABSTRACT: The synthesis of the anhydrides of 4,5-dichloro-3,6-endoxohexahydro phthalic- and 3-methyl-4,5-dichloro-3,6-endoxohexahydro phthalic acid, which the authors carried out by chlorination of the anhydride of 3,6-endoxo- and 3-methyl-3,6-endoxo--1,2,3,6-tetrahydro phthalic acid, had to be investigated by them more thoroughly, all the more as there is no mention in publications concerning the properties of 4,5-dichloro-3,6--endoxohexahydro phthalic acids and their derivatives, except the corresponding dibromo derivatives (Refs 2-9,10). In the work under review the authors investigated the synthesis of various derivatives of 4,5-dichloro-3,6-endoxohexahydro phthalic acid more closely. By the esterification of 3-methyl-4,5-dichloro-3,6-endoxohexahydro phthalic acid and of 4,5-dichloro-3,6-endoxohexahydro phthalic acid with various alcohols in the presence of benzene sulfo acid, the esters,

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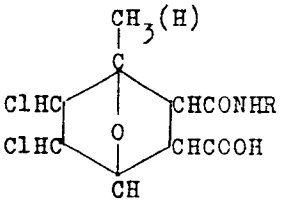
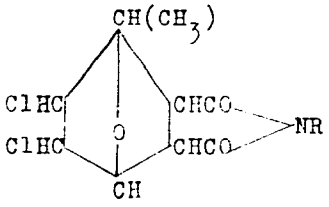
hitherto unknown, of these acids were synthesized and the corresponding amino acids (I) and (II) (Table) were synthesized by the reaction of anhydrides with amines. Two isomers were separated for the 3-methyl-4,5-dichloro-3,6--endoxohexahydro phthalic acid. Esters and amides were obtained from both isomers.



(I)



(II)

There are 1 table and 11 references, 2 of which are Soviet.

Inst. Plant Physiology AS USSR

5 (3)
AUTHORS: Bokarev, K. S., Mel'nikov, N. N. SOV/79-29-3-47/61

TITLE: Synthesis of Some N-α-Naphthylacetyl Amino Acids (Sintez nekotorykh N-α-naftilatsetilaminokislot)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 971-974 (USSR)

ABSTRACT: On the basis of investigations carried out by various research workers concerning the existence of hydrolytically active ferment systems in plants (Refs 1-5), the authors assumed that in treating plants with halogen phenoxy alkyl carboxylic acids their amides may form with amino acids and their transformation products. In fact, it was found that 3-indolylacetyl-, 3-indolylpropionyl-, and 3-indolylbutyryl-aspartic acids may form in plants (Refs 6-9). As this problem is of both theoretical and practical importance, investigations in this direction had to be carried out on a larger scale. For this purpose, syntheses of some compounds of the group of N-α-naphthylacetyl amino acids were carried out. In the patents published there are mentions of the synthesis of α-naphthylacetylglycocoll, α-naphthylacetyl-l-leucine, and α-naphthylacetylsarcosine from the α-naphthyl acetic acid chloride and the corresponding amino acids, in which connection also the use of

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Synthesis of Some N-α-Naphthylacetyl Amino Acids SOV/79-29-3-47/61

α-naphthylacetyl amino acids as stimulants for the vegetation is patented (Refs 10-15). The compounds synthesized by the authors are likewise obtained by reaction of α-naphthyl acetic acid chloride with the corresponding amino acids in alkaline solution. For the purpose of investigating the physiological activity and the mechanism of the regulating agents in vegetation, 15 N-α-naphthylacetyl amino acids were thus synthesized, 14 of which have hitherto not been described in publications. There are 1 table and 16 references, 7 of which are Soviet.

ASSOCIATION: Institut fiziologii rasteniy Akademii nauk SSSR (Institute of Plant Physiology of the Academy of Sciences, USSR)

SUBMITTED: February 6, 1958

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5 (3)

AUTHORS: Mandel'baum, Ya. A., Mel'nikov, N. N., SOV/79-29-4-25/77
Bakanova, Z. M.

TITLE: From the Field of Organic Insecticides and Fungicides (Iz oblasti organicheskikh insektofungitsidov). XLI. On the Reaction of Dialkyl-chloro-thiophosphates and Thiophosphorus-trichloride With Phenols in the Presence of Tertiary Amines (XLI. O vzaimodeystvii dialkilkhlortiofosfatov i tiotrekhkhloristogo fosfora s fenolami v prisutstvii tretichnykh aminov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 4, pp 1149-1151 (USSR)

ABSTRACT: In connection with the papers mentioned in the references 1-5 the authors especially investigated the reactions of dialkyl-chloro-thiophosphates with phenols in the presence of tertiary amines. This reaction proceeded already at room temperature in good yields and produced the corresponding dialky-aryl-thiophosphates. The solvents were of no importance, and the reaction proceeded also without solvents, but in this case the stirring of the reaction mixture is difficult owing to the crystallization of ammonium chloride.

From the Field of Organic Insecticides and Fungicides. XLI. On the Reaction of Dialkyl-chloro-thiophosphates and Thiophosphorus-trichloride With Phenols in the Presence of Tertiary Amines SOV/79-29-4-25/77

Dialkyl-aryl-thiophosphates are obtained in good yield also in alcoholic solution, which indicates that the reaction with phenols proceeds more rapidly than with alcohols. The authors investigated the reaction of dialkyl-chloro-thiophosphates with phenols in the presence of triethyl amine. O,O-dialkyl-C-aryl thiophosphates were found to result. The mechanism of the formation of dialkyl-aryl-thiophosphates from dialkyl-chloro-thiophosphates and phenols in the presence of tertiary amines can be best explained in the following way: There is an exchange reaction between amine phenolate and dialkyl-chloro-thiophosphate, yielding the hydrogen chloride of the amine and of dialkyl-aryl-thiophosphate. On the reaction of phenols with thiophosphorus trichloride in the presence of triethylamine aryl-dichloro-thiophosphates were obtained in sufficient yield. There are 1 table and 5 references, 1 of which are Soviet.

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From the Field of Organic Insecticides and Fungicides. XLI. On the Reaction of Dialkyl-chloro-thiophosphates and Thiophosphorus-trichloride With Phenols in the Presence of Tertiary Amines

SOV/79-29-4-25/77

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam (Scientific Institute of Fertilizers, Insecticides and Fungicides)

SUBMITTED: March 12,1958

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SOV/79-29-4-43/77

5(3)

AUTHORS: Baskakov, Yu. A., Mel'nikov, N. N.

TITLE: On the Reaction of Halogen Nitroparaffins With Olefines (O vzaimodeystvii galoidnitroparafinov s olefinami)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 4, pp 1233-1235 (USSR)

ABSTRACT: The addition of chloroform, carbon tetrachloride, and other halogen derivatives to olefines and halogen olefines (Ref 1) resulted in various products the synthesis of which by other methods is difficult. In spite of a large number of papers published on this topic (Ref 2) there has as yet been given no description of the reaction of polyhalogen nitroparaffins with olefines although the reaction of olefines with halogen nitroparaffins in which the halogen and the nitro group are attached to the same carbon atom would be of great interest, since their behavior differs from that of normal polyhalogen derivatives (Refs 3-7). Moreover, the higher polyhalogen nitro-compounds may very well be of practical importance for weed control and as plant growth regulators. The olefines used in the reaction were hexene-1, cyclohexene, heptene-1, octene-1, and isooctene-1; the halogen nitroparaffins were chloronitromethane, dichloronitro-

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methane, chloropicrin, bromonitromethane, tribromonitromethane, and 1,1-dichloro-1-nitroethane. The reaction took place during ultraviolet irradiation in the presence of benzoyl peroxide. As was to be expected, the reaction of halogen nitroparaffins with olefines takes place very slowly thanks to the presence of the semipolar bond in the nitro-compound molecule, with the exception of tribromonitromethane, The reaction of tribromonitromethane with olefines follows the subsequent scheme: $RCH = CH_2 + CBr_3NO_2 \longrightarrow RCHBr - CH_2CBr_2NO_2$. Thus some tribromonitroparaffins hitherto not described were synthesized Their constants may be seen from the table. Bromocyclohexyldibromonitromethane decomposes even during the vacuum distillation so that it could not be prepared in a pure state. For this reason the data regarding the condensation of bromopicrin with cyclohexene are not given. There are 1 table and 7 references, 6 of which are Soviet.

ASSOCIATION: Institut fiziologii rasteniy Akademii nauk SSSR (Institute of Plant Physiology of the Academy of Sciences, USSR)

SUBMITTED: February 18, 1958

5 (3) SOV/79-29-5-43/75

AUTHORS: Mel'nikov, N. N., Shvetsova-Shilovskaya, K. D., Kagan, M. Ya., Mil'shteyn, I. M.

TITLE: From the Field of Organic Insectofungicides (Iz oblasti organicheskikh insektofungitsidov). XLII. Synthesis of Some Mixed Esters of Dithio-phosphoric Acid (XLII. Sintez nekotorykh smeshannykh efirov ditiofosfornoy kisloty)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 5, pp 1612-1614 (USSR)

ABSTRACT: In order to explain the dependence between the insecticidal effect and the constitution of the compound, mixed (alkyl-aryl-) esters with the following general formulae are to be prepared: $(RO)_2PSS(CH_2)_nAr$ (I); $(RO)_2PSS(CH_2)_nXAr$ (X = OS), (II); $(RO)_2PSS(CH_2)_nNR'_2$ (III), and $(RO)_2PSO(CH_2)_nAr$. The present paper deals with the synthesis of the esters I and II. They were obtained by reaction between salts of dialkyl-phosphoric acids and the halogen derivatives of alkyl-substituted aryls. In some cases the reaction proceeded very slowly and the esters were obtained in low yield only. The reaction of the salts of dimethyl-thiophosphoric acid was particularly bad. The

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From the Field of Organic Insectofungicides. SOV/79-29-5-43/75
XLII. Synthesis of Some Mixed Esters of Dithiophosphoric Acid

resulting methyl esters presumably act as alkylating (methylating) agents owing to the considerable mobility of the methyl radical. Nearly all compounds presented in a table with their physical data have hitherto not been described in publications, with the exception of the esters with p-chlorobenzyl radical which are patented in the Federal Republic of Germany (Ref 11). The authors prepared the compounds according to I and II with R = CH_3, C_2H_5, C_3H_7, iso-C_3H_7, C_4H_9, Ar = C_6H_5, C_6H_4Cl, $C_6H_4NO_2$, and n = 1,2 and 3. The experimental part describes the production of O,O-dialkyl-S-benzyl-dithiophosphates and O,O-dialkyl-S-2-phenoxy-ethyl-dithiophosphates. There are 1 table and 12 references, 6 of which are Soviet.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam (Scientific Institute for Fertilizers and Insectofungicides)

SUBMITTED: April 12, 1958
Card 2/2

5(3) SOV/79-29-9-6/76

AUTHORS: Volodkovich, S. D., Vol'fson, L. G., Kuznetsova, K. V., Mel'nikov, N. N.

TITLE: From the Field of Organic Insectofungicides. XLIII. Synthesis of α-Oxides by Oxidation of Polycyclic Halogen Derivatives With Hydrogen Peroxide

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 2837 - 2839 (USSR)

ABSTRACT: Since some of the cyclic α-oxides are strong agents against insects and mold fungi, the authors oxidized some halogen derivatives of polycyclic hydrocarbons. To obtain Dildrin and Endrin it was first of all necessary to investigate the oxidation of Aldrin and Isodrin. The two former compounds were hitherto obtained solely by the oxidation of Aldrin and Isodrin with organic hydroperoxides (Refs 3-6) or H_2O_2 in the presence of pervanadic or pertungstic acid (Ref 7). To obtain the corresponding oxides, the authors oxidized the halogen derivatives of polycyclic hydrocarbons with 27-30% hydrogen peroxide solution in 80-99% acetic acid solution; almost all these halogen derivatives were transformed into

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α-oxides in good yields. The following compounds recently synthesized by the authors were oxidized: 1,2,3,4-tetrachloro-1o,1o-difluoro-1,4,5,8-di-endomethylene-1,4,4a,5,8,8a-hexahydronaphthalene; 1,2-dichloro-3,4,1o,1o-tetrafluoro-1,4,5,8-di-endomethylene-1,4,4a,5,8,8a-hexahydronaphthalene; 1,2,3,4-tetrachloro-1,4,5,8-di-endomethylene-1,4,4a,5,8,8a-hexahydronaphthalene;1,2,3,4,1o-pentachloro-1,4,5,8-di-endomethylene-1,4,4a,5,8,8a-hexahydronaphthalene (Refs 8,9). α-Oxides were obtained from all of these compounds. Aside from Dildrin and Endrin, none of the compounds synthesized by the authors are described in publications. It is interesting to note that the yield of α-oxide mainly depends on its water resistance (Table). The insecticide activity of the oxides runs in parallel with the activity of the initial products (of the unsaturated compounds). There are 1 table, 9 references, 6 of which are Soviet.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam (Scientific Institute of Fertilizers and Insectofungicide Agents)

SUBMITTED: July 17, 1958

5(3) SOV/79-29-9-7/76

AUTHORS: Mel'nikov, N. N., Ivanova, S. N.

TITLE: From the Field of Organic Insectofungicides. XLIV. Synthesis of Some Amides of Aromatic Sulfonic Acids

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 2839 - 2842 (USSR)

ABSTRACT: Various amides and anilides of sulfonic acids have manifold applications as remedies against infections; hence, they may be expected to be effective against plant diseases as well (Refs 1,2). The synthesis of various nitro-, halogen-, and halogen nitro anilides was of particular interest in this connection, since many nitro- and halogen-nitro derivatives of the aromatic series are known as excellent fungicides and vegetable agents (Refs 3-6). It was therefore expected that the introduction of sulfamide groups into the molecule of such compounds might cause the said activity to be intensified. In this connection, the synthesis and investigation of various dinitroanilides of the sulfonic acids in question was of special interest, as they were hitherto little dealt with (Refs 7,8).

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From the Field of Organic Insectofungicides. XLIV. SOV/79-29-9-7/75
Synthesis of Some Amides of Aromatic Sulfonic Acids

The hitherto unknown anilides of p-chlorobenzoic and p-toluene sulfonic acid were obtained in the ordinary way by reaction of the corresponding sulfochlorides with excess aniline in the presence of pyridine (Table). Nitro anilides of sulfonic acids were synthesized by nitration of the anilides with excess nitric acid in the presence of small quantities of H_2SO_4 (Table). It must be noted that the reaction of p-chlorobenzene sulfochloride with 2,4,5-trichloro aniline in the presence of pyridine yielded large amounts of bis-(p-chlorobenzene sulfo)- 2,4,5-trichloroanilide in addition to the compounds mentioned by publications (Ref 2), namely 2,4,5-trichloroanilide of p-chlorobenzene sulfonic acid. Among the nitroderivatives of sulfo anilides synthesized by the authors, only 2,4-dinitro anilide of 4-methyl-3-nitrobenzene sulfonic acid (Ref 7) was described, but not its sodium-, copper-, and zinc salt synthesized here. The new zinc- and copper salts obtained from the dinitro anilides of sulfonic acids are fungicides. There are 1 table, and 9 references, 1 of which is Soviet.

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MEL'NIKOV, N.N.; VOL'FSON, L.G.; KUZNETSOVA, K.V.; SAPOZHKOV, Yu.N.; GAR, K.A.; GRANIN, Ye.F.; FARBER, M.S.

Insecticides based on hexachlorocyclopentadiene. [Trudy] NIUIF no.164:8-11 '59. (MIRA 15:5)

(Cyclopentadiene)

MEL'NIKOV, N.N.; MANDEL'BAUM, Ya.A.; SHVETSOVA, K.D.; BAKANOVA, Z.M. LOMAKINA, V.I.; ZAKS, P.G.; MIL'SHTEYN, I.M.; POPOV, P.V.; POKROVSKIY, Ye.A.; BOCHAROVA, L.P.; SEDYKH, A.S.; UKRAINETS, N.S.

Improved technology for producing thiophos, metaphos, chlorophos and other phosphorus organic insecticides and investigation of new insecticides and fungicides derived from the esters of phosphoric acids. [Trudy] NIUIF no.164:11-14 '59. (MIRA 15:5)
(Insecticides) (Fungicides)

MEL'NIKOV, N.N.; SOKOLOVA, Ye.M.; SKALOZUBOVA, A.V.; TRUNOV, P.P.; ZUBOV, M.F.; GOLYSHIN, N.M.

Investigation of new copper-free fungicides for green plants and new mercury-free seed disinfectants. [Trudy] NIUIF no.164: 16-20 '59. (MIRA 15:5)
(Fungicides) (Seeds--Disinfection)

MEL'NIKOV, N.N.; NUTOVICH, P.B.; KUKALENKO, S.S.

Investigation of new herbicides and effective forms of the application of 2,4-D and 2, 4, 5-T. [Trudy] NIUIF no.164:21-22 '59. (MIRA 15:5)

(Herbicides)

MEL'NIKOV, N.N.; GALASHINA, M.L.; FADEYEVA, V.K.

Selecting preparations for antifouling paints. [Trudy] NIUIF no.164:24-25 '59. (MIRA 15:5)
(Protective coatings)

MEL'NIKOV, N.N.; GALASHINA, M.L.; FADEYEVA, V.K.

Investigation of new effective preparations for cotton defoliation before harvesting. [Trudy] NIUIF no.164:26-27 '59. (MIRA 15:5)
(Cotton) (Defoliation)

MEL'NIKOV, N.N.; SHVETSOVA, K.D.; GRAPOV, A.F.; MIL'SHTEYN, I.M.; KAGAN, M.Ya.

Investigation of new chemicals for the protection of plants. [Trudy] NIUIF no.164:27-28 '59. (MIRA 15:5)
(Insecticides)

MEL'NIKOV, N.N.; IVANOVA, S.N.; VLADIMIROVA, I.L.; VOLGINA, G.V.

Investigation of antiseptics for nonmetallic materials used under tropical conditions. [Trudy] NIUIF no.164:36-37 '59. (MIRA 15:5)

(Antiseptics)

MEL'NIKOV, N.N.; IVANOVA, S.N.; VLADIMIROVA, I.L.; VOLGINA, G.V.

Investigation of effective mercury-free antiseptics for controlling the slime mold formation in the woodpulp and paper industry. [Trudy] NIUIF no.164:28-29 '59. (MIRA 15:5)
(Woodpulp--Microbiology) (Antiseptics)

MEL'NIKOV, N.N., prof., red.; GAZIYEVA, G.B., red.; ZOTOVA, N.V., tekhn.red.

[New insecticide-fungicide mixtures and herbicides; survey articles and translations from foreign periodicals] Novye insektofungitsidy i gerbitsidy; sbornik obzorov i perevodov statei iz inostrannoi periodicheskoi literatury. Pod red. N.N. Mel'nikova. Moskva, Izd-vo inostr.lit-ry, 1960. 248 p. (MIRA 13:11)

(Agricultural chemicals)

MEL'NIKOV, N.N.; VLADIMIROVA, I.L.; IVANOVA, S.N.

Chemical means of protecting nonmetallic materials from destruction by microorganisms. Khim.prom. no.1:81-85 Ja-F '60. (MIRA 13:7)
(Materials--Deterioration)

MEL'NIKOV, N.N.

Fourth coordination conference at the Scientific Institute of Fertilizers, Insecticides and Fungicides. Zashch.rast.ot vred. i bol. 5 no.3:60-61 Mr '60. (MIRA 16:1)
(Plants, Protection of--Congresses)

MEL'NIKOV, N.N., [illegible].

Main course of the development of the production and use of chemicals for the protection of plants. Zhur. [illegible] 5 no. 3:242-249 '60. (MIRA 14:2)

(Plants, Protection of) (Agricultural chemicals)

MEL'NIKOV, N.N., prof.

Organsphosphorus insecticides. Zhur. VKHO 5 no. 3:275-285 '60.
(MIRA 13:2)

(Insecticides) (Phosphorus organic compounds)

MEL'NIKOV, N.N., prof.

Use of herbicides abroad. Zashch. rast. ot vred. i bol. 5 no.4:56-58 Ap '60. (MIRA 13:9)

(Herbicides)

MEL'NIKOV, N. N., prof.

Rogor, a new systemic insecticide. Zashch. rast. ot vred. i bol. 5 no.6:52 Je '60. (MIRA 16:1)

(Rogor)

5.1320,5.3630

77379
SOV/79-30-1-40/78

AUTHORS: Shvetsova-Shilovskaya, K. D., Mel'nikov, N. N., Kagan, M. Ya., Glushenkov, V. A.

TITLE: Concerning Organic Pesticides. LI. Synthesis of Some O,O-Dialkyl Arylmercaptomethyl Dithiophosphates

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 193-194 (USSR)

ABSTRACT: A series of O,O-dialkyl arylmercaptomethyl dithiophosphates (the majority of which the authors were the first to describe) were obtained in the reaction

$$(RO)_2PSSMe + ClCH_2SAr \longrightarrow (RO)_2PSSCH_2SAr + MeCl$$

Benzene, alcohol, or other solvents having a common radical with the dialkyl dithiophosphate molecule were used in this reaction. Biological tests were made by P. V. Popov and N. S. Ukrainets and showed that O,O-dimethyl- and O,O-diethyl arylmercaptomethyl dithiophosphate (see Table) were the most effective killers of

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Concerning Organic Pesticides. LI. Synthesis of Some O,O-Dialkyl Arylmercaptomethyl Dithiophosphates

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Constants of O,O-dialkyl-arylmercaptomethyldithiophosphates

Formula	Yield (in %)	bp (pressure in mm)	d_4^{20}	n_D^{20}
$C_6H_5SCH_2SSP(OC_2H_5)_2$	36	128° (0.03)	1.2044	1.5909
$C_6H_5SCH_2SSP(OC_3H_7)_2$	68	139—142 (0.08)	1.1670	1.5726
$C_6H_5SCH_2SSP(OC_3H_{7\text{-iso}})_2$	73	133 (0.18)	1.1691	1.5720
$C_6H_5SCH_2SSP(OC_4H_9)_2$	63	175 (0.15)	1.1227	1.5583
$C_6H_5SCH_2SSP(OC_4H_{9\text{-iso}})_2$	49	151—152 (0.18)	1.1214	1.5673
$4\text{-}ClC_6H_4SCH_2SSP(C_2H_5)_2$	63	143 (0.06)	1.2763	1.5932
$4\text{-}ClC_6H_4SCH_2SSP(C_3H_7)_2$	63	180—182 (0.25)	1.2269	1.5808
$4\text{-}ClC_6H_4SCH_2SSP(C_3H_{7\text{-iso}})_2$	75	cannot be distilled	1.2259	1.5775
$4\text{-}ClC_6H_4SCH_2SSP(C_4H_9)_2$	65		1.1721	1.5685

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Concerning Organic Pesticides. LI. Synthesis of Some O,C-Dialkyl Arylmercaptomethyl Dithiophosphates

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barn weevill among the compounds listed. The effectiveness dropped sharply with the increasing aliphatic ester radical size. There is 1 table; and 4 references, 2 U.S., 1 East German, 1 Soviet. The U.S. references are: H. T. Reinolds, T. R. Fukuto, R. L. Metcalf, R. B. March, J. Econ. Entomol., 50, 527 (1957); U.S. Pat. 2793294 (Ch. A. 51, 14196 (1957)).

ASSOCIATION: Scientific Institute of Fertilizers and Pest[illegible]s (Nauchnyy institut po udobreniyam i insektof[illegible]sidam)

SUBMITTED: January 5, 1959

Card 3/3

5.1320,5.3630

77380
SOV/79-30-1-41/78

AUTHORS: Mandel'baum, Ya. A., Mel'nikov, N. N., Bakanova, Z. M.

TITLE: Concerning Organic Pesticides. LII. Concerning the Reaction of Aryl-Dichlorothiophosphates With Magnesium Ethoxide

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 194-197 (USSR)

ABSTRACT: The reaction of aryl dichlorothiophosphates with magnesium ethoxide was investigated with the purpose of obtaining some new pesticides, and also in order to study the relationship between the reactivity and the structure of the chlorothiophosphoric acid derivatives. The reaction can proceed according to (1), (2), and (3), depending on the ratio of the reagents, the temperature of the reaction, and the time of reaction.

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Concerning Organic Pesticides. LII. Concerning the Reaction of Aryl-Dichlorothiophosphates With Magnesium Ethoxide

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$$2\,ArOPSCl_2 + (C_2H_5O)_2Mg \longrightarrow 2\,\begin{matrix}ArO\\C_2H_5O\end{matrix}\!\!>PSCl + MgCl_2 \qquad (1)$$

$$2\,\begin{matrix}ArO\\C_2H_5O\end{matrix}\!\!>PSCl + (C_2H_5O)_2Mg \longrightarrow 2\,ArOPS(OC_2H_5)_2 + MgCl_2 \qquad (2)$$

$$2\,ArOPS(OC_2H_5)_2 + (C_2H_5O)_2Mg \longrightarrow 2\,(C_2H_5O)_3PS + (ArO)_2Mg \qquad (3)$$

Aryl dichlorothiophosphates and magnesium ethoxide taken in stoichiometric amounts gave chiefly alkyl aryl chlorothiophosphates or the corresponding diethyl aryl thiophosphates. Transesterification (Formula 3) occurred only with large excess of magnesium ethoxide and on prolonged heating. Accordingly, 0.1 mole phenyl dichlorothiophosphate and 0.05 mole magnesium ethoxide on heating for 3.5 hr gave O-ethyl O-phenyl chlorothiophosphate (yield 64%; bp 95-100° C/0.2 mm). The same reagents taken in amounts of 0.05 mole and 0.1 mole, respectively, gave on heating for 7 to 17 hr O,O-diethyl O-phenyl thiophosphate (yield 82-91%; bp 120-122° C/0.8 mm). 0.1 Mole 2,4,5-trichlorophenyl

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Concerning Organic Pesticides. LII. Concerning the Reaction of Aryl-Dichlorothiophosphates With Magnesium Ethoxide

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dichlorothiophosphate and 0.3 mole magnesium ethoxide on heating at 65-70° C for 18 hr gave 0,0-diethyl 0-2, 4,5-trichlorophenyl thiophosphate (yield 78%; bp 130° C/ 0.13 mm); also, 2,4,5-trichlorophenol (yield 13%; mp 62° C), and triethyl phosphate (yield 15%). Under similar conditions, 0.1 mole 4-nitrophenyl dichloro-thiophosphate and 0.3 mole magnesium ethoxide gave 0,0-diethyl-0,4-nitrophenyl thiophosphate (yield 40%; bp 156-158° C/0.3 mm); also, p-nitrophenol (yield 28%; mp 112° C), and 0,0,0-triethyl thiophosphate (yield 30%; bp 51-52° C/0.3 mm). There are 10 references, 2 U.S., 1 U.K., 7 Soviet. The U.S. and U.K. references are: H. D. Orloff, C. J. Worrel, F. X. Markley, J. Am. Chem. Soc., 80, 727 (1958); R. F. Hudson, L. Keoy, J. Chem. Soc., 1953, 2463; T. R. Fukuto, R. L. Metcalf, J. Agr. Food Chem., 4, 930 (1956).

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5.1320,5.3630,5.3610

77381
SOV/79-30-1-42/78

AUTHORS: Mel'nikov, N. N., Shvetsova-Shilovskaya, K. D., Mil'shteyn, I. M.

TITLE: Concerning Organic Pesticides. LIII. Concerning the Reaction of Esters of Thio- and Dithiophosphoric Acids With Tertiary Amines

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 197-199 (USSR)

ABSTRACT: Looking for the explanation for the biological action of insecticides based on organophosphorus compounds, the authors assumed that the phosphorylation of cholinesterase, advanced by many authors, cannot be the only reason for this action. Another explanation could be found in the formation of quaternary ammonium salts in the reaction of thio- and dithiophosphoric acids with tertiary nitrogen atoms present in many enzymes and in nucleic acids. It was established in the present study that esters of thio- and dithiophosphoric acid reacted

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Concerning Organic Pesticides. LIII. Concerning the Reaction of Esters of Thio- and Dithiophosphoric Acids With Tertiary Amines

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on heating with tertiary amines and give the corresponding ammonium salts as the chief product. The highest reactivity was shown by esters whose molecule contained at least one methoxy group, as well as acidic aromatic radicals. The 11 new compounds thus obtained (see Table) were extremely hygroscopic, and their density could not be determined. There is 1 table; and 7 references, 4 U.S., 1 German, 2 Soviet. The U.S. references are: J. E. Casida, J. Agr. Food Chem., 4, 772 (1956); T. R. Fukuto, The Chemistry and Action of Organic Phosphorus Insecticides, Advances in Pest Control Research, I. N.Y. (1957); T. R. Fukuto, R. L. Metcalf, J. Agr. Food Chem., 4,930 (1956), U.S. Pat. 2652416.

ASSOCIATION: Scientific Institute for Fertilizers and Pesticides (Nauchnyy institut po udobreniyam i insektofungitsidam)

SUBMITTED: January 19, 1959

Card 2/2

5.3630

77382
SOV/79-30-1-43/78

AUTHORS: Mel'nikov, N. N., Shvetsova-Shilovskaya, K. D., Kagan, M. Ya.

TITLE: Concerning Organic Pesticides. LIV. A New Method of Preparation of Trialkyl Dithiophosphates and Tetraalkyl Dithiopyrophosphates

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 200-203 (USSR)

ABSTRACT: The reaction between bis(dialkoxythiophosphoryl) disulfides and dialkyl phosphites, in the presence of triethylamine, proceeds with the formation of corresponding esters of dithiophosphoric acid.

$$[(RO)_2PS]_2S_2 + (R'O)_2POHN(C_2H_5)_3 \rightarrow 2\ (RO)_2PSSR' + (C_2H_5)_3NHPO_3'$$

The obtained produces are mostly new compounds (see Table 1). The reaction between bis(dialkoxythiophosphoryl) disulfides and trialkyl phosphites proceeds

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Concerning Organic Pesticides. LIV. A New Method of Preparation of Trialkyl Dithiophosphates and Tetraalkyl Dithiopyrophosphates

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Table 1

Formula	Yield (%)	bp (pressure in mm)	d_4^{20}	n_D^{20}
$(CH_3O)_2P(S)SCH_3$*	70	51—52° (0.2)	1.2338	1.5200
$(C_2H_5O)_2P(S)SCH_3$	88	63.5—64 (0.08)	1.1951	1.5100
$(C_3H_7O)_2P(S)SCH_3$	53	68—70 (0.1)	1.0806	1.5008
$(iso\text{-}C_3H_7O)_2P(S)SCH_3$**	80	60—60.5 (0.07)	1.0736	1.4950
$(C_4H_9O)_2P(S)SCH_3$	63	89—90 (0.08)	1.0540	1.4960
$(iso\text{-}C_4H_9O)_2P(S)SCH_3$	78	75—76 (0.07)	1.0483	1.4930
$(CH_3O)_2P(S)SC_2H_5$	32	48—50 (0.08)	1.1641	1.4958
$(C_2H_5O)_2P(S)SC_2H_5$***	61	57—58 (0.08)	1.1111	1.5050
$(C_3H_7O)_2P(S)SC_2H_5$	57	73.5—75 (0.08)	1.0623	1.4968
$(iso\text{-}C_3H_7O)_2P(S)SC_2H_5$	37	61—62 (0.08)	1.0757	1.4910

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Concerning Organic Pesticides. LIV. A New Method of Preparation of Trialkyl Dithiophosphates and Tetraalkyl Dithiopyrophosphates

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with formation of trialkyl dithiophosphates, as well as unsymmetrical tetralkyl dithiopyrophosphates. The latter are not described in the literature.

$$[(RO)_2PS]_2S_2 + (R'O)_3P \longrightarrow (RO)_2PSSR' + (RO)_2PSSPO(OR')_2$$

The above products are obtained, in good yields, accompanied by a small amounts of side products. There are 2 tables; and 10 references, 7 Soviet, 1 French, 1 Japanese, 1 U.S. The U.S. reference is: G. R. Norman, N. M. Lesuer, T. W. Mastin, J. Am. Chem. Soc., 74, 161 (1952).

ASSOCIATION: Scientific Institute of Fertilizers and Pesticides (Nauchnyy institut po udobreniyam i insektofungitsi-dam)

SUBMITTED: January 19, 1959

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3/3

MEL'NIKOV, N.N.; KRAFT, V.A.

Herbicides and plant regulators. Part 35: Synthesis of some triphenylphenoxyalkylphosphonium salts. Zhur.ob.khim. 30 no.6:1918-1921 Je '60. (MIRA 13:6)

1. Institut fiziologii rastenii Akademii nauk SSSR.
(Phosphonium compounds) (Herbicides)

ZEN'KEVICH, A.G.; ZAKS, P.G.; MANDEL'BAUM, Ya.A.; MEL'NIKOV, N.N.

Organic insectofungicides. Part 55: Synthesis of some alkylarylthiophosphoric acid hydrazides. Zhur.ob.khim. 30 no.7:2317-2319 Jl '60. (MIRA 13:7)

1. Nauchnyy institut po udobreniyam i insektofungitsidam, Moscow.
(Hydrazides) (Phosphorothioic acid)

MEL'NIKOV, N.N.; SHVETSOVA-SHILOVSKAYA, K.D.; KAGAN, M.Ya.

Organic insectofungicides. Part 61: Interaction between bis (dialkoxythiophosphono) disulfides and triaryl- and diarylphosphites. Zhur.ob.khim. 30 no.7:2319-2322 Jl '60. (MIRA 13:7)

1. Nauchnyy institut po udobreniyam i insektofungitsidam, Moskva.
(Phosphites) (Sulfides)

5.3[illegible] [illegible]
SOV/[illegible]

AUTHORS: Voiodkovich, S. D., [illegible], K[illegible], L. K., Mel'nikov, N. N., S[illegible]

TITLE: Concerning the Preparation [illegible] "Heptachlor"

PERIODICAL: Zhurnal [illegible], [illegible], Nr [illegible] [illegible] (USSR)

ABSTRACT: "Heptachlor" [illegible] ene-3a,4,7,7a-[illegible] white crystals with [illegible] organic solvents.

Hexachloro[illegible] with [illegible] pentadiene and [illegible]

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APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103[illegible]

Concerning the Preparation of Insecticide "Heptachlor"

77532
SOV/80-33-1-[illegible]

[illegible] The latter was chlorinated and heptachlor was [illegible] (yields are not [illegible]). Heptachlor content in the reaction mixture is increased to [illegible]% by chlorination for 30 to 120 minutes. The optimal conditions for the formation of chlordene in CCl_4 are [illegible]% excess of C_5H_6, at [illegible], duration [illegible] minutes. For the chlorination of chlordene, the following conditions are recommended: the presence of activated (at 120°, for 1-2 hours) kieselguhr and a temperature not over 5°. Heptachlor content is about 70%. The yield of heptachlor is determined by the total amount of introduced chlorine and, with certain limits, is independent of the feed rate of chlorine and duration of chlorination. There are 6 figures; and 2[illegible] references, 4 Soviet, [illegible] U.S., 3 German, 4 U.K., 2 French. The [illegible] most recent U.S. references are: H. B[illegible], Y. A. Tajima, R. E. Lidov, Am. Pat. [illegible]; M. Kleiman, ibid.,

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Concerning the Preparation of Insecticide "Heptachlor"

77532
SOV/80-33-1-1/4

2741640; ibid.,2741639; ibid., 2741641; H. Einestone, R. E. Lidov, J. H. Knaus, P. W. Hoverton, ibid., 2576666.

ASSOCIATION: Research Institute of Fertilizers and Pesticides (Nauchnyy institut po udobreniyam i insektofungitsidam)

SUBMITTED: June 3, 1959

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5.3400,5.1320

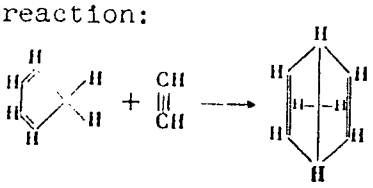
77659
SOV/80-33-2-34/52

AUTHORS: Belikova, N. A., Vol'fson, L. G., Kuznetsova, K. B., Mel'nikov, N. N., Person, A. I., Plate, A. F., Pryanishnikova, M. A.

TITLE: Concerning the Isolation of Aldrin and Dieldrin

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 2, pp 454-463 (USSR)

ABSTRACT: The article describes the synthesis of aldrin and dieldrin based on information gathered from foreign patent literature and on the authors' studies of the basic reaction of hexachlorocyclopentadiene with bicyclo-(2,2,1)-heptadiene-2,5. The latter was synthesized in a continuous flow installation, according to the reaction:



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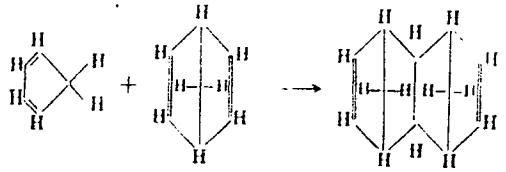
The optimum conditions for the above condensation of cyclopentadiene with acetylene were: molar ratio 1:1.1 to 1:2; temperature 345° C; pressure 20 atm. The yield of bicycloheptadiene under those conditions was about 48% and dropped sharply with rising temperature. The spent gas contained 95-97% acetylene and could be recycled. Investigation of the thermal stability showed that bicyclo-(2,2,1)-heptadiene-2,5 remained unchanged at 290° C, but under the conditions of the reaction it reacted with one cyclopentadiene molecule:



At 340° C and above, bicycloheptadiene was isomerized into cycloheptatriene; at 390° and 8 atm the extent of isomerization reached 20%, and a small amount of

Concerning the Isolation of
Aldrin and Dieldrin

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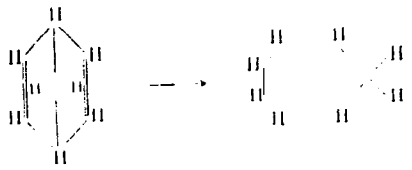
toluene (1%) [illegible]



The conditions governing the direction of the reaction of bicycloheptadiene with hexachlorocyclopentadiene in the synthesis of aldrin were investigated.

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Aldrin and Dieldrin

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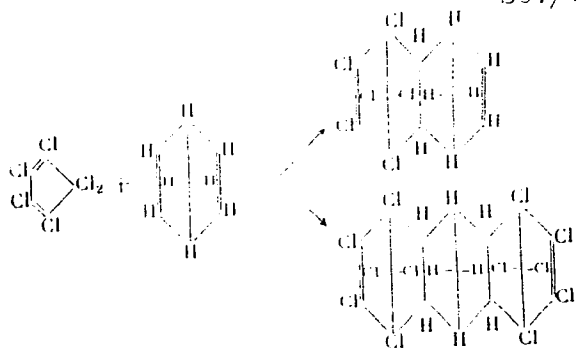

It was found that the optimum conditions were as follows: molar ratio of the above reactants 2.5:1; time of reaction 18 hr; temperature 90-110° C. The complete synthesis of aldrin consisted of the following operations: (1) condensation of acetylene with cyclopentadiene; (2) distillation of the reaction products and separation of dicycloheptadiene; (3)

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Aldrin and Dieldrin

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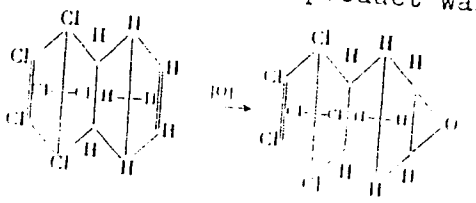
condensation of bicycloheptadiene with hexachloro-cyclopentadiene; (4) steam distillation of the excess bicycloheptadiene; (5) separation of aldrin from water; (6) separation of bicycloheptadiene from water and returning it to the condensation stage (1). The steam-distilled bicycloheptadiene was 95% recovered and could be used again without any further purification. Dieldrin was obtained on oxidation of aldrin by means of 3-fold excess of 27% hydrogen peroxide in 80% acetic acid at 100° C. Dieldrin thus obtained had mp 100-130° C. The content of dieldrin in the technical product was about 80%



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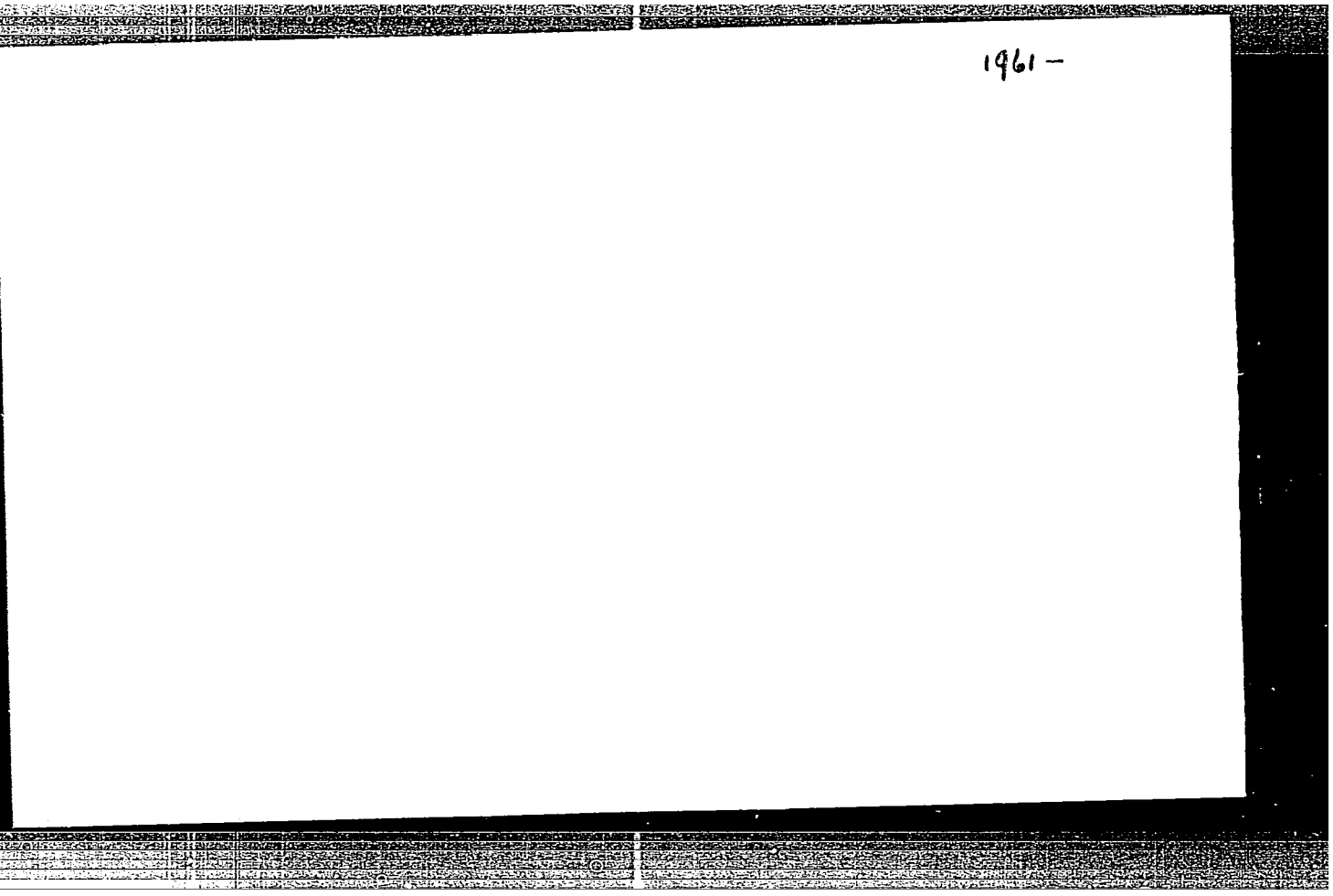
Concerning the Isolation of Aldrin and Dieldrin

77659
SOV/80-33-2-34/52

Some experimental work was done by G. A. Tarasova at the Institute of Organic Chemistry, Academy of Sciences, USSR. Determination of combustion temperatures was made by M. P. Kozina and S. M. Shtekher at the Luginin Laboratory of Thermochemistry of Lomonosov Moscow State University. Cyclopentatriene analysis was made by M. Ye. Vol'pin at the Institute of Element-Organic Compounds, Academy of Sciences, USSR. There are 4 figures; 1 table; and 23 references, 9 U.S., 2 U.K., 1 Canadian, 1 Indian, 2 Swiss, 1 East German, 7 Soviet. The 5 most recent U.S. and U.K. references are: Handbook of Aldrin, Dieldrin, and Endrin Formulations, Shell Chemical Corp. (1954); J. Hine, J. A. Brown, L. H. Zalkow, W. E. Gardner, M. Hine, J. Am. Chem. Soc., 77, 3, 594 (1955); R. E. Lidov, U. S. Pat. 2669577, 21.IV.1953; B. Soloway, U.S. Pat. 2676131, 2.V.1954; R. E. Lidov, S. B. Soloway, Brit. Pat. 692547 (1954).

SUBMITTED: June 25, 1959
Card 5/6



MEL'NIKOV, N.N., prof., red.; GAZIYEVA, G.B., red.; DZHATIYEVA, F.Kh., tekhn. red.

[Herbicides, insecticides, and fungicides; a collection of translations from foreign periodicals] Gerbitsidy i insektofungitsidy; sbornik perevodov iz inostrannoi periodicheskoi literatury. Moskva, Izd-vo inostr.lit-ry, 1961. 290 p. (MIRA 15:7)
(Herbicides) (Insecticides) (Fungicides)

TARASOVA, G.A.; PLATE, A.F.; MEL'NIKOV, N.N.; VOL'FSON, L.G.; TISHCHENKO, A.I.

Condensation of polychlorocyclopentadiences with acetylene.
Neftekhimiia 1 no.1:65-69 Ja-F '61. (MIRA 15:2)

1. Institut organicheskoy khimii AN SSSR imeni N.D.Zelinskogo.
(Condensation products (Chemistry))

MEL'NIKOV, N.N.

Problems involved in the manufacture of chemicals for the protection of plants and for weed control. Khim.prom. no.5:297-299 My '61.
(MIRA 14:6)

(Plants, Protection of)
(Weed control)

MEL'NIKOV, N.N.; GRAPOV, A.F.

Reactions of aryldiazonium salts with thio- and dithiophosphonic acids. Zhur.VKHO 6 no.1:119-120 '61. (MIRA 14:3)

1. Nauchnyy institut po udobreniyam i insektofungitsidam.
(Diazonium compounds) (Phosphonic acid)

MEL'NIKOV, N.N., prof.

Outlook and tasks of chemistry in plant protection. Zashch. rast. ot vred. i bol. 6 no.11:19-21 N '61. (MIRA 16:4)

1. Nauchno-issledovatel'skiy institut po udobreniyam i insektofungisidam imeni Ya.V. Samoylova.
(Agricultural chemicals)
(Plants, Protection of)

MEL'NIKOV, N.N.; SHVETSOVA-SHILOVSKAYA, K.D.; MAKSIMOVA, Z.I.; BOCHAROVA, L.P.; SHAPOVALOVA, G.K.

Recovery of insecticidal preparations in aryl esters of the N-alkyl carbamic acid. Khim. prom. no.10:15-17 O '61. (MIRA 15:2)
(Insecticides)

MEL'NIKOV, N.N.; VARSHAVSKIY, S.L.; SHVETSOVA-SHILOVSKAYA, K.D.; ANDRIANOVA, L.V.; BOCHAROVA, L.P.; KOFMAN, L.P.

Phosphamide, a highly effective insecticide. Khim. prom. no.10: 17-20 O '61. (MIRA 15:2)

(Insecticides)

MEL'NIKOV, N.N.

Some trends in studying the mode of action of phosphorus containing organic insecticides. Khim. prom. no.10:20-22 O '61. (MIRA 15:2)

(Insecticides)

MEL'NIKOV, N.N.; ANDREYEVA, Ye.I.; SHVETSOVA-SHILOVSKAYA, K.D.; IVANOVA, S.N.; SKALOZUBOVA, A.V.

Disinfectants of seeds not containing mercury. Khim. prom. no.10: 26-28 O '61. (MIRA 15:2)

(Seeds--Disinfection)

MEL'NIKOV, N.N.; ZETKIN, V.I.; LIBMAN, B.Ya.; SOKOLOVA, Ye.M.; ZAKHAROV, Ye.V.; PARFENOV, A.I.; TRUNOV, P.P.; GOLYSHIN, N.M.

Organic fungicides as substitutes for copper-containing preparations. Khim. prom. no.10:28-30 O '61. (MIRA 15:2)
(Fungicides)

MEL'NIKOV, N.N.; KUKALENKO, S.S.; VARSHAVSKIY, S.L.; KOFMAN, L.P.; BELOV, M.D.

Prospective herbicides. Khim. prom. no.10:39-40 O '61. (MIRA 15:2)

(Herbicides)

MEL'NIKOV, N.N.; VOL'FSON, L.G.; VOLODKOVICH, S.D.

Herbicides and plant growth regulators. Part 36: Synthesis of certain tetrachloro-, pentachloro-, and hexachloro-3,6-endomethylenetetra hydrophthalamic acids and their imides. Zhur. ob. khim. 31 no. 2:499-506 F '61. (MIRA 14:2)
(Phthalamic acid) (Herbicides)

SHVETSOVA- SHILOVSKAYA, K.D.; MEL'NIKOV, N.N.; ANDREYEVA, Ye.I.; BOCHAROVA, L.P.; SAPOZHKOV, Yu.N.

Organic insectofungicides. Part 57: Synthesis, insecticidal and fungicidal properties of certain arsenic organic compounds. Zhur. ob. khim. 31 no.3:845-849 Mr '61. (MIRA 14:3)

1. Nauchnyy institut po udobreniyam i insektofungitsidam imeni Ya. V. Samoylova.
(Arsenic organic compounds)
(Insecticides)(Fungicides)

MEL'NIKOV, N.N.; MANDEL'BAUM, Ya.A.; LOMAKINA, V.I.

Organic insectofungicides. Part 58: Synthesis of certain derivatives of dialkoxyphosphonopropionic, butyric, and toluic acids. Zhur. ob. khim. 31 no.3:849-852 Mr '61. (MIRA 14:3)

1. Nauchnny institut po udobreniyam i insektofungisidam imeni Ya. V. Samoylova.
(Propionic acid) (Butyric acid)(Toluic acid)

VLADIMIROVA, I.L.; MEL'NIKOV, N.N.

Organic insectofungicides. Part 59: Synthesis of some new oxime dirivatives. Zhur. ob. khim. 31 no.3:852-854 Mr '61. (MIRA 14:3)

1. Nauchnyy institut po udobreniyam i insektofungitsidam imeni Ya. V. Samoylova.

(Oximes)

MEL'NIKOV, N.N.; KHASKIN, B.A.; SHVETSOVA-SHILOVSKAYA, K.D.

Organic insectofungicides. Part 60: Reactions between thio- and dithiophosphoric acids and secondary amines. Zhur. ob. khim. 31 no. 11:3605-3610 N '61. (MIRA 14:11)

1. Nauchnyy institut po udobreniyam i insektofungitsidam.
(Phosphorothioic acid) (Phosphorodithioic acid)
(Amines)

MANDEL'BAUM, Ya.A.; MEL'NIKOV, N.N.; BAKANOVA, Z.M.; ZAKS, P.G.

Organic insecticide-fungicides. Part 61: Synthesis of some mixed ethyl mercaptoethyl thiophosphates. Zhur.ob.khim. 31 no.12:3947-3949 D '61. (MIRA 15:2)

1. Nauchnyy institut po udobreniyam i insektofungitsidam im. Ya.V.Samoylova, Moskva.
(Phosphothioic acid)
(Insecticides)

MEL'NIKOV, N.N.; MANDEL'BAUM, Ya.A.; LOMAKINA, V.I.; LIVSHITS, V.S.

Organic insecticide-fungicides. Zhur.ob.khim. 31 no.12:3949-3953 D '61. (MIRA 15:2)

1. Nauchnyy institut po udobreniyam i insektofungitsidam im. Ya.V. Samoylova (NIUIF), Moskva.
(Insecticides)
(Acetic acid)
(Phosphorus organic compounds)